

REMARKS

Claims 1-8 are pending and have been amended for clarification purposes. In addition, the specification has been amended to update the cross-referencing paragraph to related applications.

Reconsideration of the application is respectfully requested for the following reasons.

I. The Rejection under 35 USC § 112, First Paragraph

Claims 1-8 were rejected under 35 USC § 112, first paragraph, on grounds that the specification fails to enable the inventions defined in these claims for the following reasons.

(1) Claim 1 fails to recite how the state signal and data signal are derived. Claim 1 has been amended to recite “time-advance sampling a state sample of a first main sequence which includes a PN sequence; generating a state signal based on the time-advanced state sample and a first igniter sequence; and spreading a data stream based on the first main sequence; and transmitting the state signal and a data signal which corresponds to the spread data stream.” See, for example, pages 1-12 of the specification with reference to Figures 1A and 1B for a disclosure enabling these features.

(2) Claim 1 recites spreading and transmitting steps which do not correspond to Figures 1A and 1B. Claim 1 has been amended to clarify these steps in a way that is supported, for example, by Figures 1A and 1B. More specifically, as amended, claim 1 recites that the spreading step involves spreading a data stream based on the first main sequence. These features are performed by spreader 113 as shown in Figure 1A. The transmitting step involves transmitting the state signal and

data signal, the latter of which corresponds to the spread data stream. These features are shown as outputs to blocks 110 and 120 in Figure 1A.

(3) Claims 2 and 8 recite steps that take place in a receiver, but these claims depend from claim 1 which recites in its preamble a method that is performed in a transmitter. The preamble of claim 1 has been amended to recite a method for “processing signals in a communication system,” which can include both a transmitter and a receiver. Accordingly, the subject matter of claims 2 and 8 are now consistent with the preamble of amended claim 1.

(4) Claim 2 recites shift register generators and main sequences which are not the same. To make this more evident, claims 1 and 2 have been amended to recite first and second main sequences. As shown in Figures 1A and 1B, these sequences may be generated by different shift register generators.

(5) Claims 3, 4, and 6-8 are not supported by the specification.

Claim 3 has been amended to recite that the first igniter sequence and the first main sequence are transmitted simultaneously. See the “together with” language at Paragraph [66] of the specification for support.

Claim 4 has been amended to recite that the first and second main sequences are generated by shift register generators (SRGs) which have different structures. See the “together with” language at Paragraph [66] of the specification for support. Claims 6-8 are supported by the specification in view of the amendments to base claim 1.

(6) Claim 5 does not recite how the state signal is derived. Claim 5 has been amended to recite receiving and despreading a state signal based on an igniter sequence, and receiving and despreading a data signal based on the despread signal and a main sequence which includes a PN sequence. See, for example, pages 1-12 of the specification with reference to Figures 1A and 1B for a disclosure enabling these features.

Applicants respectfully submit that the foregoing amendments and remarks are sufficient to overcome the § 112, first paragraph, rejection.

II. The Rejection under 35 USC § 112, Second Paragraph

Claims 1-8 were rejected for being unclear for the following reasons.

(1) Claim 1 does not recite steps that achieve the goal of performing fast acquisition of a PN sequence in a transmitter. To remove this ground of rejection, claim 1 has been amended to recite a method for processing signals in a communication system. The body of the claim is then dedicated to indicating how these signals are processed. In accordance with one non-limiting embodiment, these steps may be applied in such a way as to accomplish fast acquisition of a PN sequence.

(2) Claim 1 recites spreading and transmitting steps that lack cooperation or connection with one another. Claim 1 has been amended to recite cooperating steps, which include spreading a data stream based on the first main sequence and transmitting the state signal and a data signal which corresponds to the spread data stream.”

(3) Claim 5 recites a preamble that is objectionable for reasons similar to claim 1. Claim 5 has also been amended to recite a method for processing signals in a communication system. The body of claim 5 has also been amended to clarify the processing steps.

(4) Claim 6 recites terms having no antecedent basis. Claims 5 and 6 have been amended to provide an antecedent basis for each of the terms noted by the Examiner, or these terms have been deleted from claim 6. The remaining phrases which the Examiner found to be unclear have also been deleted.

(5) Claim 7 recites steps that lack cooperation with the steps recited in claim 1. Claim 7 has been amended to define features relating to the period of the first igniter sequence recited in claim 1. Claim 7 is therefore in proper cooperative relationship with the steps of claim 1, and moreover satisfies the requirements of 35 USC § 112, fourth paragraph, as being a proper dependent claims.

(6) Claim 8 recites unclear subject matter. Claim 8 has been amended to clarify that the step of receiving and synchronizing the first igniter sequence includes: acquiring the first igniter sequence transmitted from the transmitter and determining an acquisition completion of the first igniter sequence.

Applicants respectfully submit that the foregoing amendments and remarks are sufficient to overcome the § 112, second paragraph, rejection.

III. The Rejection under 35 USC § 102(b)

Claim 5 was rejected for being anticipated by the Nakamura patent.

The Nakamura patent discloses a spread spectrum transmitter and receiver. The transmitter uses a shift register to delay a PN sequence output from generator 31. The delayed output from this shift register is then combined with chips by multiplexer 34 and the resulting data signal is transmitted. The receiver recovers the data in the transmitted signal using a correlator and another PN code generator. See column 8, lines 19-60 with reference to Figures 9(a) and 9(b).

However, the Nakamura patent does not disclose all the features of amended claim 1, including “time-advance sampling a state sample of a first main sequence which includes a PN sequence, generating a state signal based on the time-advanced state sample and a first igniter sequence, spreading a data stream based on the first main sequence, and transmitting the state signal and a data signal which corresponds to the spread data stream.”

Without a disclosure of these features, it is respectfully submitted that the Nakamura patent cannot anticipate claim 5 or any of its dependent claims. Withdrawal of the § 102 rejection is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application are respectfully requested.

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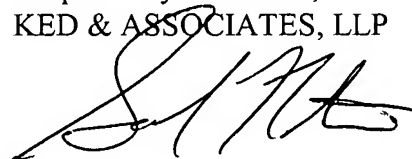
Docket No. K-0017B

Amdt. dated June 22, 2007

Reply to Office Action of March 22, 2007

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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